



Hanovia
QUARTZ LAMPS

Presenting

HANOVIA QUARTZ LAMPS



HANOVIA CHEMICAL & MFG. CO.
CHESTNUT STREET & N. J. R. R. AVENUE, NEWARK, N. J.

Branch Offices

ATLANTA
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CHICAGO
30 North Michigan Avenue
NEW YORK
30 Church Street
SAN FRANCISCO
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ASSOCIATED COMPANIES

Quarzlampen-Gesellschaft, m. b. H.
Hanau, a. M.
Germany

British Hanovia Quartz Lamp Company, Ltd.
Slough, Bucks.
England

Hanovia Societe Francaise des Lampes de Quartz, S. A.
35 Rue des Ecoles
Paris (5^e) France

South African Hanovia Quartz Lamp Co., (Pty), Ltd.
Wembley Bldgs.
82a Van Brandis Street
Johannesburg, South Africa

Nippon Hanovia Quartz Lamp Company, Ltd.
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Tokyo-Fu, Japan

Tai Yang Teng Kung Ssu
32 Fuyu Gai Jap Conc.
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Hanovia Luz Ultra Violeta, Ltd.
55 Praça Marechal Floriano
Rio de Janeiro, Brazil

Hanovia Compania International de Lamparas de Quarzo
Cassilla Correo 1394
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FOREWORD

 HANOVIA QUARTZ LIGHT APPARATUS was introduced to the medical profession in 1905. Since its early acceptance it has steadily earned the approval of physicians, hospitals and clinics, until at the present time there are over 100,000 HANOVIA LAMPS in use throughout the civilized world. The Quartz Mercury Vapor Lamp has been, from the beginning, the standard source of Ultraviolet Rays. And to say that the Quartz Lamp has always been the standard source of Ultraviolet Rays is virtually equivalent to naming the HANOVIA QUARTZ LAMPS—the ALPINE SUN and the KROMAYER. For HANOVIA LAMPS were the first practical artificial source of Ultraviolet Rays.

Improvements in the HANOVIA QUARTZ LAMPS have kept pace with the development of clinical practice, yet mechanical perfection has always been maintained. Each HANOVIA LAMP, before it leaves the factory, must pass a rigid examination and actual test. The manufacturers realize that the physician must devote his energy to his profession, and that he has neither time nor inclination to experiment with undependable apparatus.

Constant and diligent research comprises part of a continuous program of service which HANOVIA extends to the medical profession. Through its Research Staff it is steadily broadening the field for the application of HANOVIA QUARTZ LAMPS and making more certain the results which the physician can obtain through their use.

Another phase of cooperation extended by HANOVIA is the maintenance of a bulletin service, which keeps the physician informed of current progress in the field of ultraviolet therapy. A feature of this service is the issuance of "*The Quartz Lamp*," a publication which is sent gratis to all users of HANOVIA LAMPS. This pamphlet is helpful in aiding the physician to perfect his technique and in furthering his general knowledge concerning ultraviolet therapy.

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The Scope of Quartz Light Therapy

*A*PRESENTATION such as this is necessarily limited to a bare discussion of the forms of apparatus available to the profession. It is manifestly impossible to treat, even in outline, the importance of Quartz Light therapy itself and the role played by HANOVIA in the development of this important branch of therapeutics.

So vast are the possibilities of ultraviolet and so convincingly have they been demonstrated by recognized authorities, that it is sufficient to draw the attention of the profession to the work that has already been accomplished. Every progressive physician should investigate Quartz Light therapy, and no better method can be suggested than recourse to the various medical journals and society transactions. Reprints of many papers pertinent to ultraviolet may be had from HANOVIA upon request.

There are, furthermore, several very thorough books dealing with this subject. The following are recommended:

"CLINICAL APPLICATION OF SUNLIGHT AND ARTIFICIAL RADIATION," by Edgar Mayer, M. D.

"PHYSIOTHERAPY TECHNIQUE," by C. M. Sampson, M. D.

"ACTINIC THERAPY," by T. Howard Plank.

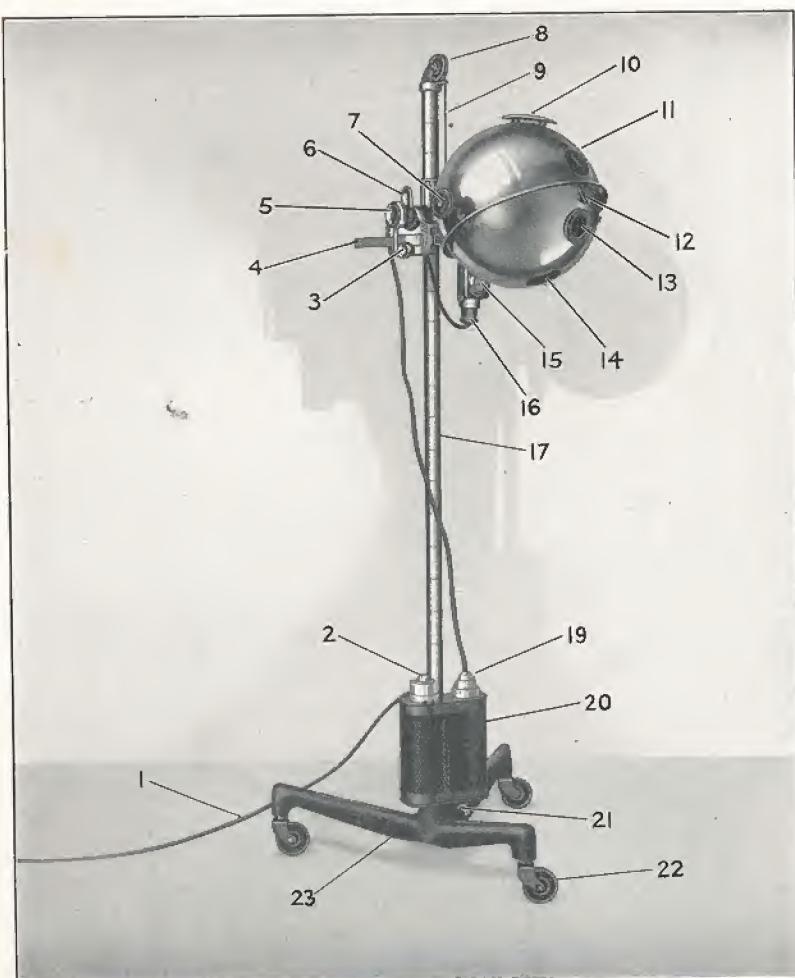
"PHYSICAL THERAPY IN DISEASES OF THE EYE, EAR, NOSE AND THROAT," by Drs. Hollender and Cottle.

(These books may be obtained through HANOVIA Representatives or from the Newark Office.)

Some of the major classifications under which numerous conditions have been successfully treated by ultraviolet radiation are: Internal Medicine, Surgery and Infection, Tuberculosis, Dermatology and G. U., Nose, Throat and Ear, Dentistry and Gynecology. The physician may judge from this list something of the breadth and scope of Quartz Light therapy.

The HANOVIA publication, "*Technique Handbook on Quartz Light Therapy*," accompanies each Alpine Sun and Kromayer Lamp. In it will be found an extensive compilation of conditions which have been successfully treated by ultraviolet, and the respective technique employed in their treatment.

Alpine Sun Lamp



ALPINE SUN LAMP—FLOOR STAND TYPE
Direct Current . . . Model 2030

[KEY]

1. Electric Cord
2. Lighting Switch
3. Tension Spring Grip
4. Extending Cross Arm
5. Hand Wheel
6. Cord Guide
7. Hand Wheel for tilting burner
8. Pulley
9. Stranded Wire
10. Ventilator

[KEY]

11. Stationary Hood
12. Shutter Dial
13. Aperture
14. Ventilator
15. Operatometer
16. Lamp Plug
17. Upright
19. Rheostat Plug
20. Rheostat
21. Wing Nut for Upright
22. Caster
23. Base

The Alpine Sun Lamp

(Air Cooled)

The new model Alpine Sun Lamp shown on the opposite page is the achievement of over twenty years' study of the physician's requirements in the administrating of ultraviolet light. Easily manipulated, thoroughly dependable, and extremely effective, this lamp is the most efficient quartz lamp obtainable for general body radiation.

The Floor Stand Type, because of its simplicity and convenience, is a very popular model, and the one most universally used for the radiation of large areas. Most of the improvements which have been introduced in this model are in the mechanical features, for this lamp has long since been recognized for its intensity of rays and its endurance.

The new Alpine Sun Lamp is manufactured in models for the Direct and Alternating current of 90-120 and 200-220 volts.

The Lamp embodies throughout the highest type of workmanship and mechanical perfection, possessing a beauty of design and finish which make it an ornament to any physician's office.

Upright and Counter Weight: The upright is a strong steel cylinder, beautifully finished in nickel, and containing an internal counter-balance. This construction permits the lamp to be used within a vertical range of from 28 to 60 inches from the floor. The upright is graduated by horizontal markings of three inches, which makes most convenient the measuring of distance for treatments. The counter-

balance adjustment automatically controls the height at which the lamp is to be used.

Pulley: On the top of the upright is an attractive free-running pulley over and through which runs a long stranded wire connecting the internal counter-weight and the lamp carriage. The pulley has a ball-bearing flange which allows the lamp to be rotated around the upright and insures faultless tracking of the attaching wire.

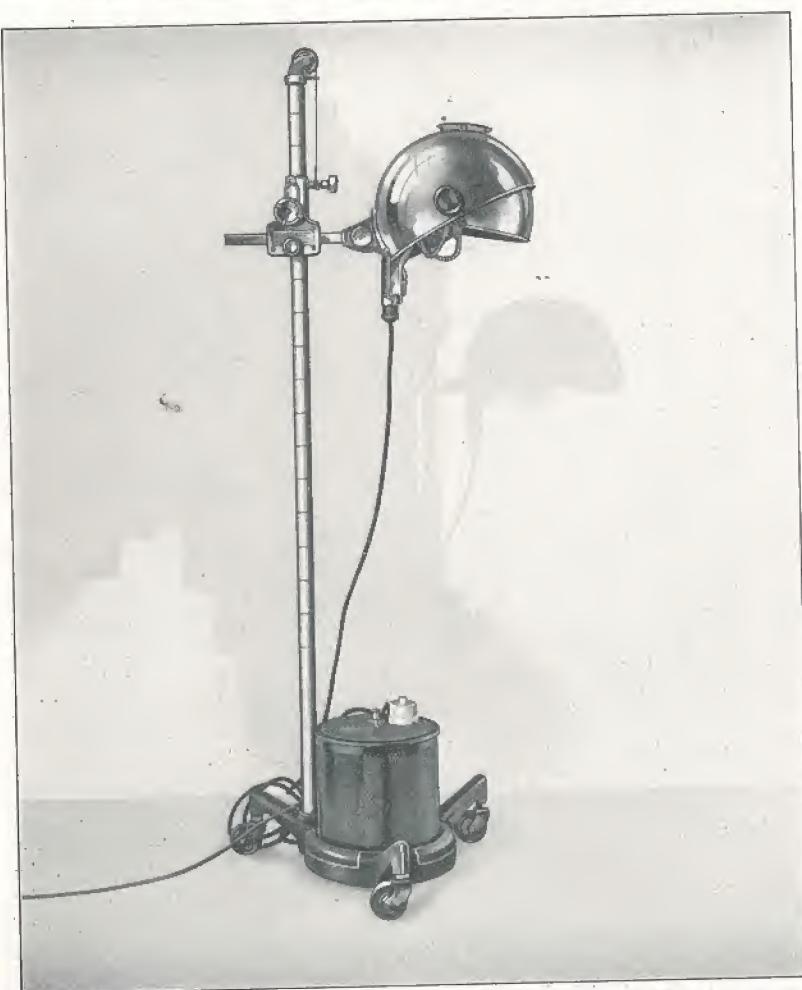
Lamp Carriage: This consists of a tubular member, encircling the upright with a friction clamping shoe, operated by a hexagonal hand screw. It is so designed that it holds the Lamp carriage rigid in any position, without scratching or marring the finish of the upright.

Rack and Pinion Device: Attached to the tubular member of the carriage, its purpose is to project the hood horizontally away from the stand. No teeth, in which fingers or clothing might be caught, are exposed. The pinion is locked into position by a tension spring, preventing the hood from overhauling. The range of motion is from 12 to 18 inches from the upright, enabling the burner to be brought to any desired operating position.

Electric Control: For the Direct Current Alpine Sun Lamp a rheostat is provided, conveniently mounted on the base of the upright.

The Alternating Current Alpine has a transformer.

Alpine Sun Lamp

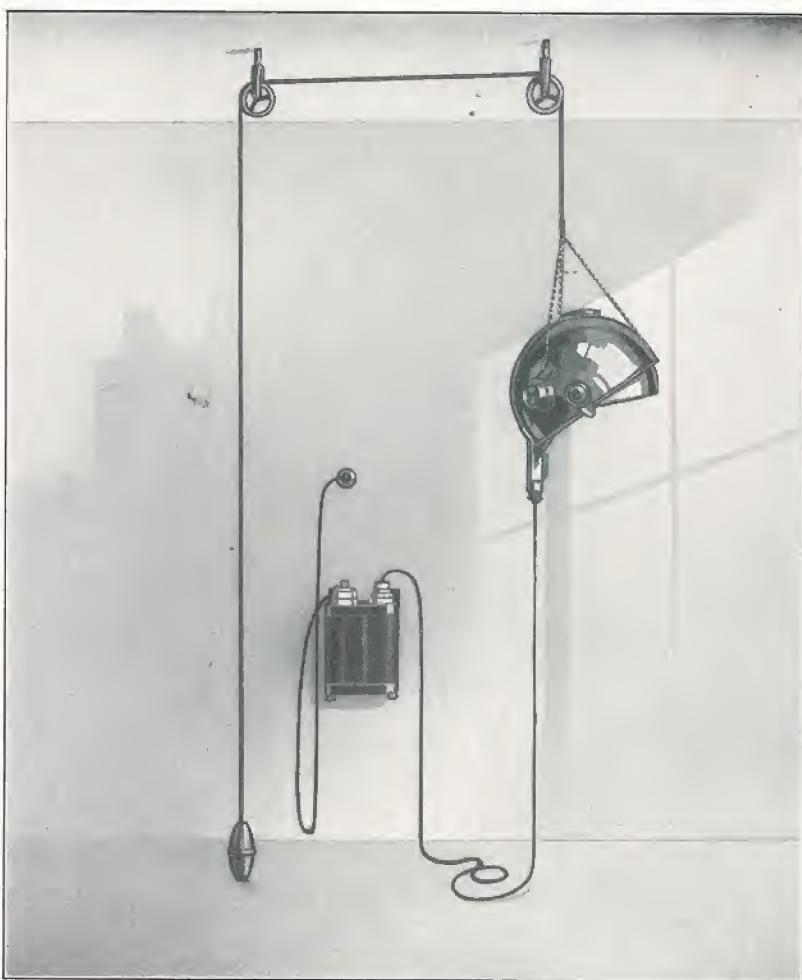


ALPINE SUN LAMP—FLOOR STAND TYPE
Alternating Current . . . Model 2210

The ALPINE SUN LAMP, alternating current, possesses the same features of sturdiness and excellent workmanship as the direct current model. Those mechanical advantages which distinguish all the HANOVIA LAMPS are found in this model. However, since this lamp is for the use of alternating current, a transformer is used,

which is placed in the base, making the entire unit a mobile one. This base rests upon casters with rubber tire wheels, which prevents noise and friction. The exceptionally well-built base insures maximum stability. The model shown above is an excellent apparatus for general office practice.

Alpine Sun Lamp



ALPINE SUN LAMP—CEILING SUSPENSION TYPE

Direct Current . . . Model 2034

This type of lamp is a very convenient unit for use where space must be conserved, and where the use of the lamp may be stationary. Suspended from the wall by two pulleys, it is self-balancing by virtue of the counter-weight which is attached to one end of the cord. The rheostat is attached very conveniently to the wall, so that the entire apparatus oc-

cupies but a minimum of space. When the lamp is called upon for service, the patient is relaxed at the desired distance from the lamp, which can be raised or lowered at will.

Note: This lamp may also be had in the alternating current (Model No. 2035), suspended in a similar manner. However, a transformer is furnished instead of the rheostat. This transformer may be located conveniently near the wall.

Alpine Sun Lamp



ALPINE SUN LAMP—SPECIAL MODEL
*Equipped with Voltmeter and Variable Resistance Adjuster
Voltmeter attachment 2066*

The ALPINE SUN LAMP, for both the direct and alternating current types is scientifically built and adjusted, so that on installation it is correctly set to give the full intensity of ultra-violet rays necessary for the proper therapeutic procedure. The OPERATOMETER completely serves the purpose of visible indication that the lamp is operating and ready for use. However, where there is a wide variance in fluc-

tuation of voltage, it may be advisable to use in addition to the OPERATOMETER a VOLTMETER with an adjustable transformer or rheostat to take care of the wide fluctuation. Here, then, is a complete unit with the necessary mechanical arrangements—at only a slight extra cost over the standard equipment. This unit is also available for the KROMAYER LAMP.

Alpine Sun Lamp



ALPINE SUN LAMP—WALL BRACKET TYPE

Alternating Current

Model 2033

The WALL BRACKET ALPINE SUN LAMP is another type which has been designed for use where floor space must be economized. The bracket swings on hinges and is provided with pulleys and counter-weight, accurately balancing the lamp at any desired height. The arm of the bracket has an adjustable extension with a radius

up to four feet. It is attractively finished in oxidized copper. The model shown above is of the alternating current type, the transformer being shown in the foreground.

Note: This lamp may also be had in the direct current (Model No. 2032), in which case the transformer is replaced by a rheostat attached very conveniently to the wall.

Portable Alpine Sun Lamp



PORTABLE MODEL ALPINE SUN LAMP

Direct Current - - - Model 2304
Alternating Current - - - Model 2302

The PORTABLE MODEL ALPINE SUN LAMP is produced with the view of meeting the demand for greater portability in special situations. Portable units offer all the efficiency of the regular office models. Sturdily made in accordance with the exacting HANOVIA STANDARD—so designed that they may be easily taken from place to place. These models were developed with a view to securing sufficient compactness, so that they might be carried

in the physician's car, but particular care was taken not to strip down the apparatus to a degree which would impair their effectiveness and utility life when used in a fixed location. Exceedingly simple and trouble-free, these models fulfill all the requirements of general body irradiation with Ultraviolet Light, in quantity and quality which is necessary to obtain the proper therapeutic results.

Luxor Alpine Sun Lamp



LUXOR MODEL ALPINE SUN LAMP

*Direct Current - - - Model 2300
Alternating Current - - Model 2301*

The LUXOR MODEL ALPINE SUN LAMP has been arranged with the same mechanical skill and precision embodied in all HANOVIA LAMPS—using the same quartz mercury burner as the Alpine Sun Lamp, which is unexcelled as a producer of Ultraviolet Rays in quantity and quality which must be attained to have the proper therapeutic potency. Both the alternating and direct current LUXORS are alike in outward appearance—a rheo-

stat is used in the direct, a transformer in the alternating. These Lamps are thoroughly potent therapeutically—they are only lacking in respect to the famous Alpine Sun Lamp in appearance and finer adjustments—by reason of their lower cost. This model is an excellent one for installation in the home of the patient under proper medical guidance, in cases where light is indicated, but where the patient is unable to visit the office.

Alpine Sun Lamp HOOD

The ALPINE SUN LAMP HOOD still retains the contour so favorably accepted by the medical profession since the introduction of Quartz Light therapy. Aluminum, of which this hood is made, has the best reflecting power for ultraviolet rays and it minimizes any interference to reflection.

This hood is made up of two hemispheres, one rotating inside the other on pivots. The lower half is equipped with a selective shutter, having several openings of different sizes. This arrangement adapts the ALPINE SUN LAMP for local radiation at short distances. The device is readily controlled by turning a black wing nut. In one of the openings of the selective shutter is a colored glass. This enables the operator to watch the burner while it is lighted, or during operation.



Alpine Sun Lamp Hood

The various quartz applicators (see pages 18-19) may be used with the ALPINE SUN LAMP by means of a special adaptor which is placed on the outside of the shutter opening of the hood.

With this new adaptation of the hood, the electrical wires leading to the burner are concealed, and the OPERATOMETER is an integral part of the hood unit, allowing a clear reading of it at all times.

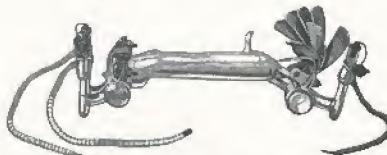
Alpine Sun Lamp BURNERS

The ALPINE SUN LAMP BURNERS have been regarded for many years as the most efficient type of quartz lamp burners manufactured. Both in this country and on the continent they have acquired a reputation for unusual intensity and long burning life.

These burners are of the entire quartz mercury anode type, made complete in our own plant.



Direct Current



Alternating Current

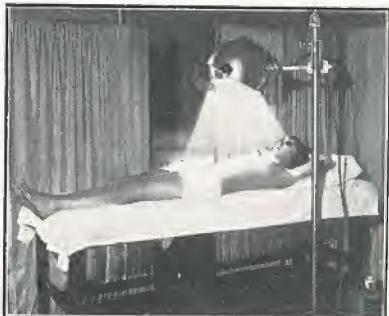
The Direct Current Burner is an arc tube of about 4 inches long, with two transverse mercury containers, and the electrode vessels, all of pure transparent quartz, which necessitates a predominating skill in production. The electric current is conducted through the burner by ground-in-mercury sealed electrodes, to which leads are attached. Fan-shaped metal coolers are mounted on the mercury containers and serve to diffuse the heat generated at the electrodes, thus regulating the current density and the intensity of the rays, adding greatly to the effective life of the burner.

The Alternating Current Burner has an arc tube about 5 inches long and two positive electrodes instead of one.

ALPINE SUN LAMP In Use

The following illustrations show the proper technique to be followed in treating a few of the conditions which have been benefited by ultraviolet radiation. The ease with which this

potent therapeutic agent may be administered is apparent. Many physicians have expressed their admiration for the simplicity with which the ALPINE SUN LAMP functions.



Alpine Sun Lamp in use in the private office of a physician, furnishing a general body radiation. Systemic and endocrine disorders have responded favorably to ultraviolet radiation. The above illustration shows the proper technique to be followed in treating such conditions.

Alpine Sun Lamp in use at Babies' Hospital, New York, for the prevention and cure of rickets. It is a matter of pride to the manufacturers of HANOVIA equipment that such a prominent institution should use the Alpine Sun Lamp.

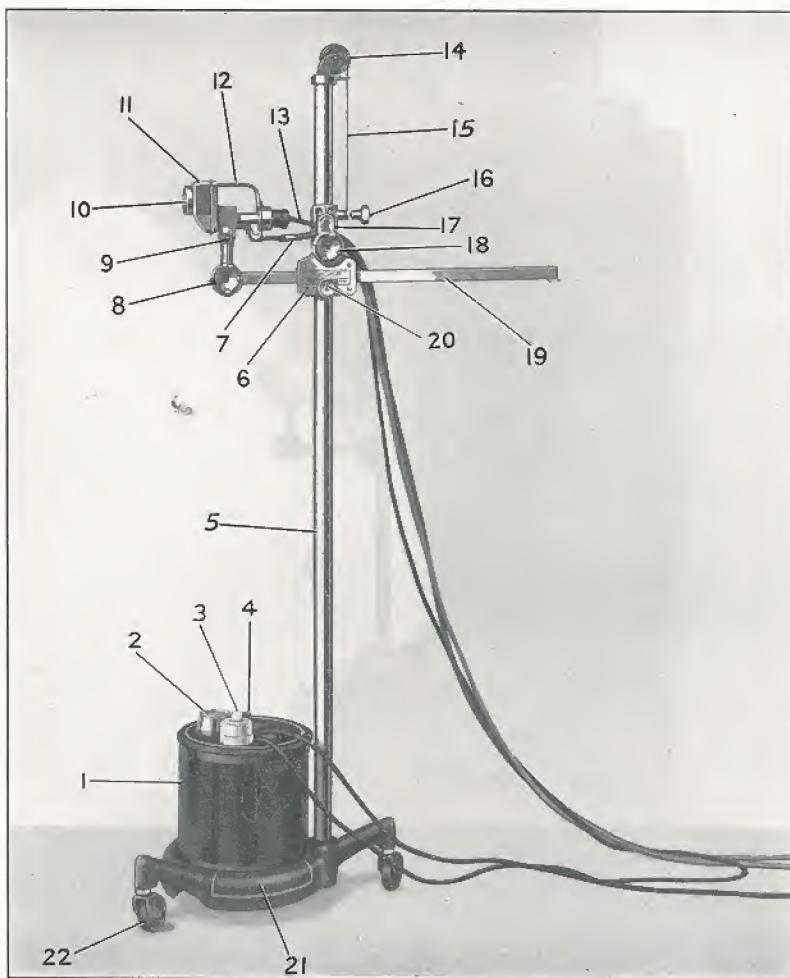


Alpine Sun Lamp in use at the Baby Welfare Station, Hoboken, N. J., furnishing a general body radiation for the prevention of rickets. According to Huldschinsky, "Protective ultraviolet radiation against rickets should be carried out as extensively as protective vaccination against smallpox."



Alpine Sun Lamp being used at the Lymanhurst School for Tuberculosis Children, Minneapolis, Minn. The success that has attended the treatment of tuberculosis with ultraviolet radiation is most gratifying. The consensus of filed reports is that ultraviolet therapy is an effective modality for treating this disease.

Kromayer Lamp



KROMAYER LAMP—FLOOR STAND TYPE
Alternating Current . . . Model 2022

[KEY]

1. Transformer.
2. Operatometer
3. Switch
4. Plunger Rod
5. Upright
6. Rack and Pinion Device
7. Water Tubes
8. Hand Wheel
9. Burner Grip
10. Burner Window
11. Burner
12. Burner Handle

[KEY]

13. Burner Plug
14. Pulley
15. Stranded Wire
16. Hexagonal Hand Screw
17. Cord and Water Tube Guide
18. Hand Wheel
19. Cross Arm
20. Tension Spring Grip
21. Base
22. Casters

The KROMAYER LAMP

(Water Cooled)

The KROMAYER LAMP is a water-cooled lamp and is especially adapted for treating localized areas, for compression treatments and for focused application to orificial conditions, such as in Gynecological work, Eye, Ear, Nose and Throat, Sinus infections, etc.

Such work, of course, calls for the most precise apparatus, and with this in mind HANOVIA has constructed the KROMAYER LAMP, which has earned an enviable reputation with the profession for dependability, efficiency and precision.

The type shown on the opposite page is the Floor Stand Type, alternating current. It presents a convenient and intense source of ultraviolet rays, and by far surpasses any other apparatus of similar purport. Its superior construction is, in many respects, similar to that of the Alpine Sun Lamp. It has the same handsome finish, features the same casters, base, upright, counter-weight and lamp carriage. A few exclusive advantages worthy of specific mention are:

Rack and Pinion Device: This device projects in a horizontal direction the cross arm which carries the burner. It has a range of from 4 to 24 inches from the upright, giving ample latitude for any particular use. The adjustments of the cross arm are of particular significance in orificial work, as the finest movements are possible without fear of injuring the most delicate tissues. Located immediately

above the pinion grip is a hand wheel, operating a geared clamp, by means of which the cross arm may be set at any desired angle.

Burner Grip: This grip is of unique construction, and has a particular advantage on the Kromayer Lamp, for the burner may be tilted for lighting without removing it from the cross arm. The grip is firmly clamped to the cross arm by a neat friction clamp and hand wheel.

Spring Clamp: This feature is of original design, and is part of the burner grip. With it the burner is held in place, without necessitating any adjustments. The burner can easily be removed from its seat for hand operation with the use of one hand, and the same condition is true in replacing it.

Burner Casing: This casing is a very important feature of the Kromayer Lamp. The construction considerably emphasizes the superiorities of this type of burner, as it enhances the therapeutic intensity. The handle is an integral part of the burner casing and gives an index to the center of the arc tube. The water tubes are carried straight backwards, preventing them from kinking when used at different angles. The extreme lightness of the Kromayer burner is of decided advantage to the operator.

NOTE: The burner casing with the burner mounted is commonly called the "burner." See page 25.

Applicators



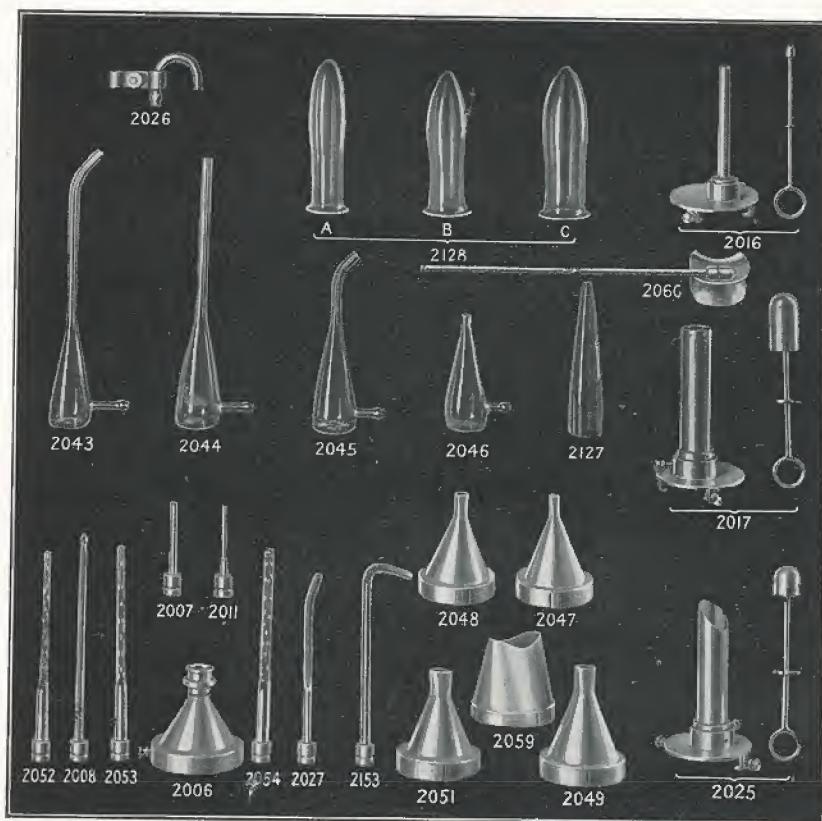
The HANOVIA APPLICATORS

The KROMAYER LAMP owes its extreme flexibility to the various HANOVIA Applicators which are available. The care and thought exercised in the de-

signing and manufacture of these applicators are evidenced in their employment by some of the most eminent practitioners of quartz light therapy.

- | | | | |
|-------|--|------|---|
| 2002 | Small Round Quartz Lens | 2029 | Adult Goggles |
| 2003 | Large Square Quartz Lens | 2042 | Vernon Nasal Speculum |
| 2004 | Medium Round Quartz Lens | 2150 | McCaskey's Prostatic Applicator |
| 2005 | Hemorrhoid Applicator | 2152 | Sampson Pyorrhea Applicator—set of three |
| 2009 | Blue Ultra Violet Glass Filters, 2, 3,
4, or 5mm. thick | 2154 | Sampson Laryngoscope |
| 2010 | Mica Protecting Window | 2200 | Adaptor for Alpine |
| 2014 | Quartz Lamp Window | 2201 | Urethral Applicator |
| 2015 | Sharpe Localizer with three tubes | 2202 | Wagner Prismatic Reflector— $\frac{1}{4}$ " |
| 2018 | Pharyngeal Applicator (Plank) | 2203 | Wagner Prismatic Reflector— $\frac{1}{2}$ " |
| 2019 | Baldwin Laryngoscope | 2204 | Wagner Prismatic Reflector— $\frac{5}{8}$ " |
| 2019a | Baldwin Laryngoscope for Alpine | 2205 | Ashland Universal Pyorrhea Applicator |
| 2024 | Blue Window complete | 2222 | Infant Goggles |
| 2024a | Blue Window without holder | | |

Applicators



The HANOVIA APPLICATORS

The following illustrations show the standard applicators in present use. They are made of pure crystal quartz, fused quartz and metal. In a few applicators, bubbles are placed in the quartz rods to diffuse the rays. HANOVIA Applicators readily fit all types of Kromayer Lamps, as well as the Alpine Sun

Lamp. Naturally, they are made especially for the Kromayer Lamp, although encouraging results may be obtained when it is necessary to use them with the Alpine Sun Lamp. A more detailed description may be found in the "Technique Handbook."

- | | |
|------|---|
| 2045 | Ladabeck Quartz Irrigator—small curved |
| 2046 | Ladabeck Quartz Irrigator—small straight |
| 2047 | Wagner Nasal Speculum— $\frac{1}{4}'' \times \frac{3}{16}''$ |
| 2048 | Wagner Nasal Speculum— $\frac{3}{16}'' \times \frac{3}{16}''$ |
| 2049 | Wagner Nasal Speculum— $\frac{1}{2}'' \times \frac{3}{16}''$ |
| 2051 | Wagner Nasal Speculum— $\frac{3}{8}'' \times \frac{3}{16}''$ |
| 2052 | Meyersburg Nasal Applicator— $\frac{1}{4}''$ |
| 2053 | Meyersburg Nasal Applicator— $\frac{1}{16}''$ |
| 2054 | Meyersburg Nasal Applicator— $\frac{3}{16}''$ |
| 2059 | Laurie Gingival Applicator |
| 2060 | Green's Lip Retractor |
| 2127 | Mayer Aural Applicator |
| 2128 | Wagner Quartz Specula—set A, B, and C |
| 2153 | Sampson Hay Fever Applicator |
- 2006 Holder for Quartz Rods
 2007 Quartz Rod, $2\frac{3}{4}$ inches long with straight end
 2008 Quartz Rod, $6\frac{3}{4}$ inches long with straight end
 2011 Weaver Applicator
 2016 Sinus Applicator (McManus)
 2017 Plank Proctoscope
 2025 Burrow's Prostatic Applicator
 2026 Rubber Tube Clamp
 2027 Mehler Nasal Applicator
 2043 Ladabeck Quartz Irrigator—large curved
 2044 Ladabeck Quartz Irrigator—large straight

Kromayer Lamp

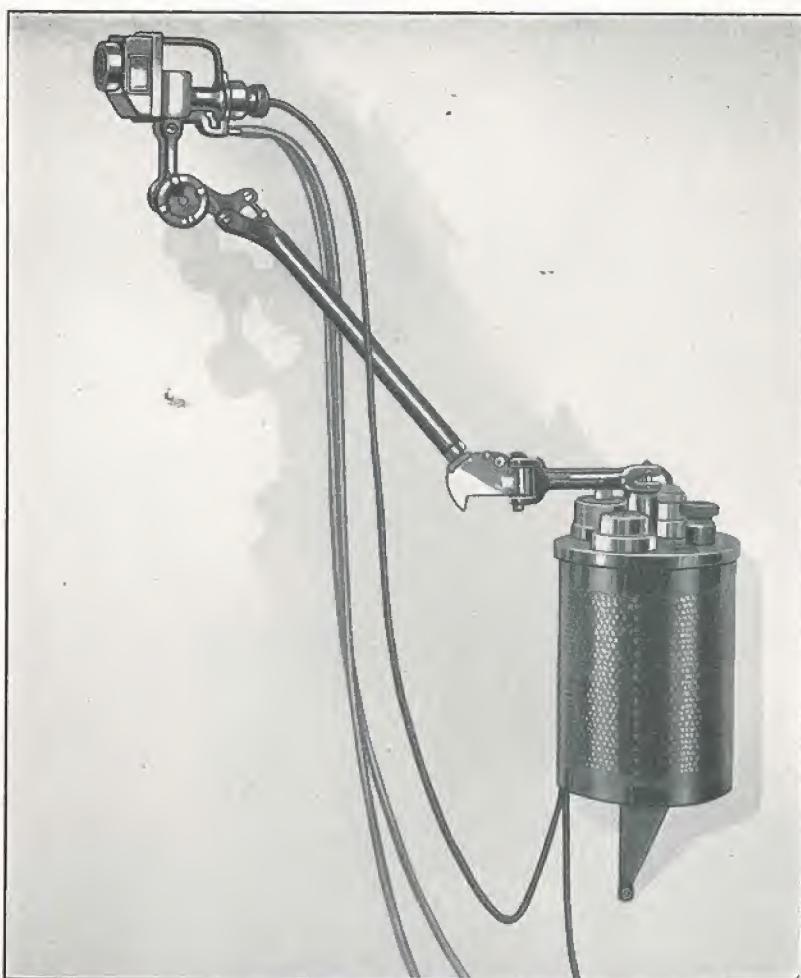


KROMAYER LAMP—FLOOR STAND TYPE
Direct Current - - - Model 2001

The model shown above is, in every respect, as efficient a general office model as the alternating current lamp. It is, however, made for direct current. As may be seen, the lamp is an extremely compact unit, the rheostat being carried upon the tripod. Where

a standard size lamp is required, at a nominal investment, this model is particularly desirable. It features the unique rack and pinion device,^{*} the standard Kromayer burner and burner grip.

Kromayer Lamp



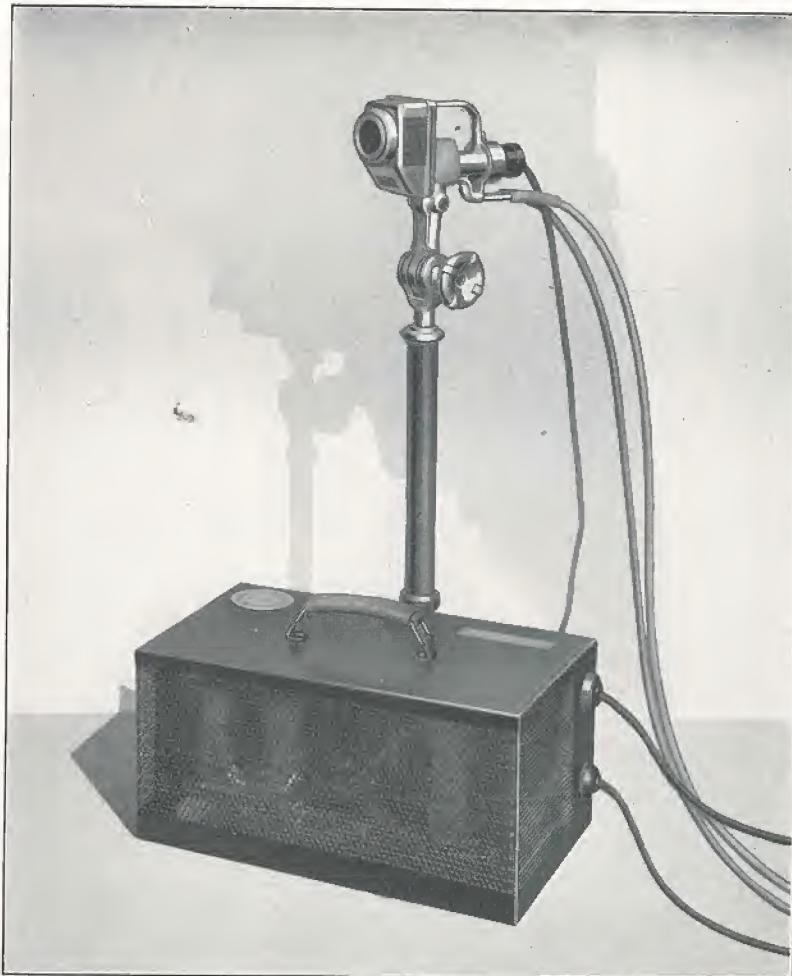
KROMAYER LAMP—WALL BRACKET TYPE
Direct Current . . . Model 2057

The WALL BRACKET KROMAYER LAMP, made for direct current, is a very convenient type of apparatus for any office where space is limited, or where the apparatus can be used in a certain part of the office without constant change of position. For the dental profession and for those physicians specializing in oral work, this unit is especially convenient. The rheostat is fastened to the wall by a

bracket which extends through the center, and to which is attached a four-foot jointed arm. This arm permits of lamp adjustment to vertical or horizontal position, and allows of an ample operating range.

NOTE: This model is also made for alternating current (Model 2058), in which case a separate transformer replaces the rheostat.

Portable Kromayer Lamp



PORTABLE KROMAYER TYPE
Direct Current . . . Model 2305
Alternating Current . . . Model 2303

The PORTABLE MODEL KROMAYER LAMP has been adapted to meet the demand for greater portability in special situations. The burner and burner-casing of this model is of the standard type as used on the regular model lamps. Therefore, the Portable Kromayer is equally adapted for irradiating localized areas, for compression treatments, and for focused application to orificial conditions. The electrical control case, containing the

transformer or rheostat, forms the base of the lamp. The complete unit includes a packing container, which, together with the carrying handle on the electrical control case, enables the outfit to be readily carried in two compact sections. To the physician, who desires quartz light apparatus which can be readily transferred from his office to the home of the patient, to the clinic or hospital, this is a dependable and efficient unit.

Kromayer Lamp

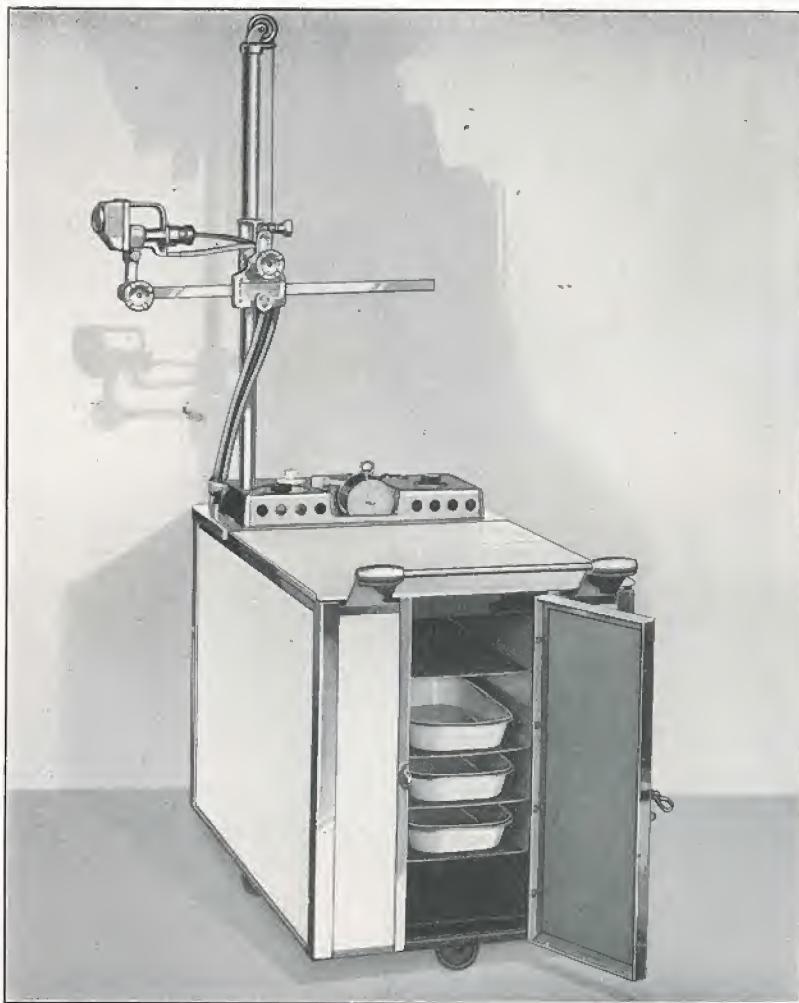


KROMAYER LAMP—PORTABLE (SELF-CONTAINED) UNIT

*Alternating Current . . . Model 2211
Direct Current . . . Model 2212*

This model is the result of careful study of the requirements of the modern dentist and physician. Limited working space has created a demand for compact equipment, and in this model compactness has been achieved to a degree never attained before. In both alternating and direct current lamps, the cooling system is contained

within the standard, making outside water connections unnecessary. In the alternating current lamp the transformer is also contained in the standard. A noteworthy feature is the self-suspending burner, which permits of free manipulation and utter comfort to the operator.



KROMAYER LAMP—BEDSIDE UNIT

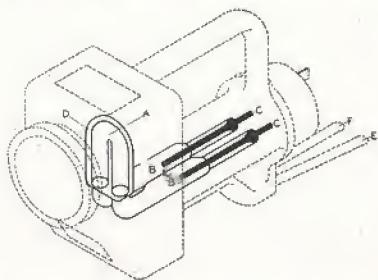
*Direct Current Model 2055
Alternating Current Model 2056*

The BEDSIDE UNIT KROMAYER LAMP is a beautifully designed apparatus, especially constructed for hospitals, clinics and large offices, where it is found necessary to constantly move the lamp from place to place, or where running water is not available. Its mobility is increased by the use of a self-contained water-cooling system. The lamp is built into a hand-

some white body attractively trimmed in nickel, into which is built the water tank for cooling the lamp. In the standard is also contained a circulating pump which is operated simultaneously with the lamp switch. It is impossible to light the lamp before the water has been turned on. The water-flow is visible, and cannot escape attention.

The Kromayer BURNER

The KROMAYER BURNER is of the entire quartz mercury anode type. Its longer life and lower operating cost in comparison with other burners have been conclusively proved.



A service which is distinctive with HANOVIA is the repairing and exchanging of worn out or injured burners at a very nominal cost.

The Kromayer RHEOSTAT

(*Direct Current*)

The direct current rheostat is enclosed in a perforated sheet metal casing and is mounted on the lamp stand, making the unit mobile. All connections and devices necessary for the operation of the lamp are mounted on the cover plate of the rheostat and are easily accessible.



The OPERATOMETER

The HANOVIA Operatometer, an ingenious mechanism, has been devised to serve as a guide in the efficient and safe operation of the HANOVIA Quartz Lamps. With the direct current equip-



ment, in addition to its other functions, the Operatometer substitutes for the polarity indicator.

The employment of the Operatometer not only assures exacting operating intensity, but it results in a saving of time. Heretofore, the customary procedure of commencing radiation has been to light the lamp and wait for five or six minutes to allow normal operating intensity to be developed. This procedure required the watching of a clock, caused loss of time and frequently resulted in the application being made before the full intensity has been attained.

The use of the Operatometer eliminates this annoyance, and assures the user that his lamp is operating under the desired conditions. When the quartz lamp has attained its proper operating equilibrium, the indicator of the Operatometer will so designate, and the treatment may be begun immediately.

The KROMAYER LAMP In Use

Immediately adaptable to all local, orificial and cavity conditions, the KROMAYER LAMP offers to the profession a powerful source of ultraviolet rays. Its wide range of uses and convenience of application have won for the KROMAYER LAMP considerable favor with prominent physicians.

For the distance radiation of small lesions the distance usually employed

is about two-and-a-half inches from the lamp window. In compression treatment the lens is pressed firmly against the tissue, the object being to produce a local dehematization to enable the ultraviolet rays to penetrate into the deeper layers of the epithelial tissues. The following illustrations show the proper technique to be followed in a few conditions:



The KROMAYER LAMP being used in treating OTITIS MEDIA. Other conditions of the ear (such as Middle Ear Suppuration, etc.) have been successfully treated by the use of the KROMAYER LAMP.



This photo shows an ALPINE SUN and KROMAYER LAMP UNIT in use. The advantages of such a set may be seen immediately, as it permits of the simultaneous treatment of widely diversified conditions. In hospitals, clinics and large offices, such an apparatus results in increased efficiency and time-saving.



This illustration shows the correct method of inserting the applicator into the throat for Hay Fever work.



The KROMAYER LAMP used in the treatment of varicose ulcers. Special applicator permits of such compression treatment with utmost effectiveness.

Super Alpine Sun Lamp



SUPER ALPINE SUN LAMP Combination Unit

Equipped with SUPER ALPINE SUN LAMP and KROMAYER LAMP

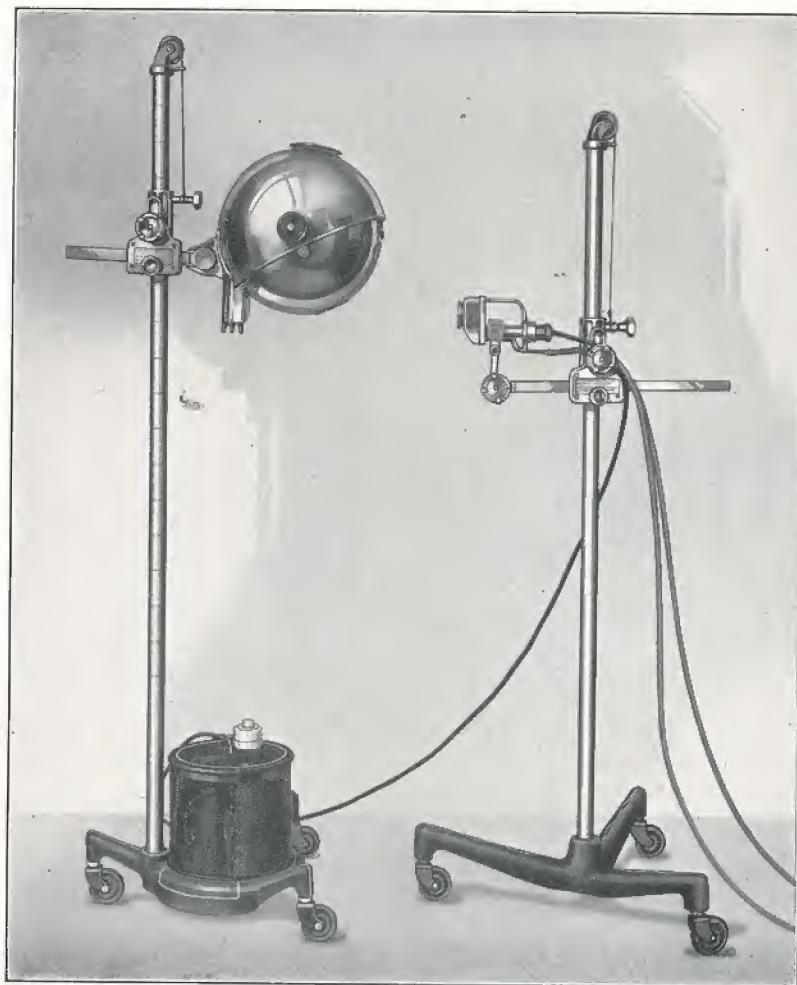
SUPER ALPINE SUN LAMP <i>Alternating Current</i>	Model 2068	SUPER ALPINE SUN LAMP <i>Direct Current</i>	Model 2070
SUPER ALPINE SUN LAMP—Combina- tion Unit with Kromayer <i>Alternating Current</i>	Model 2069	SUPER ALPINE SUN LAMP—Combina- tion Unit with Kromayer <i>Direct Current</i>	Model 2071

*In this Unit continues the supremacy of HANOVIA—maker of the
ORIGINAL THERAPEUTIC ULTRA VIOLET LIGHT EQUIPMENT.*

The Unit gives greater increased ultra violet intensity—has a simplified control—adjustable burner voltage—accurate dosage control, combined in an improved mechanical design. The

SUPER ALPINE SUN LAMP offers longer burner life, and is indispensable for the busy physician and hospital where time is of importance.

Combination Unit



COMBINATION UNIT—FLOOR STAND TYPE
Alternating Current - - - *Model 2028*

The Combination Unit photographed above is the response to a demand for both lamps, with every mechanical feature present, but with a simplified operation control. Both members of this combination unit are complete in every detail, but are operated by a single transformer. The model will be found

extremely satisfactory in offices where there is adequate space for an apparatus of this size. It occupies less space than two separate units, yet in every respect it is as effective. Both the Alpine Sun and Kromayer sections of this model are operated through a single source of electric current.

Combination Unit



COMBINATION UNIT—PORTABLE (SELF-CONTAINED) UNIT

*Alternating Current . . . Model 2213
Direct Current . . . Model 2129*

This mobile combination unit represents what is perhaps the most noteworthy achievement in compact therapeutic apparatus. For its wide range of utility, which covers every conceivable use to which ultraviolet has been applied therapeutically, it is extraordinarily convenient and easy to operate. The transformer, which in other equipment is necessarily a separate part of

the lamp, is built in the standard. Moreover, a self-contained cooling apparatus makes it unnecessary to have any outside water connection. For the physician who requires therapeutic apparatus in its widest scope of uses, but is handicapped by limited working space, this combination unit furnishes a perfect working medium.

Combination Unit



COMBINATION UNIT—SPECIAL FLOOR STAND TYPE
Direct Current . . . Model 2206

The Combination Unit shown above is practically of the same construction as Catalog No. 2028. However, it is designed for direct current. Both members of this combination unit are operated from the same rheostat, which

is located on the base of the Kromayer Lamp. Since the individual lamps in this combination are complete in every mechanical detail, their adaption to the widest range of uses is assured.

Combination Unit



COMBINATION UNIT—FLOOR STAND TYPE
Direct Current . . . Model 2021

The Combination Unit shown above is the model for the physician who desires both the Alpine Sun and the Kromayer Lamps, in convenient, compact structure, and at a nominal investment. Both lamps are built on a single up-

right, which is supported on a movable base. The entire unit occupies a minimum of space, and when not in use may be rolled to any convenient corner of the office.

Diagnostic Unit



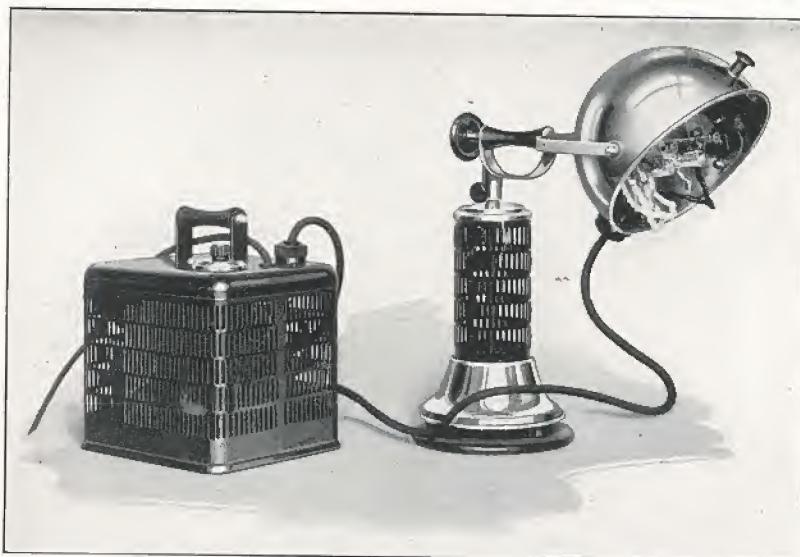
ALPINE SUN LAMP WITH DIAGNOSTIC SET

Diagnostic Set—No. 2067

With the growing importance of the use of Ultraviolet Light for diagnosis, this Diagnostic Filter has been constructed to fit and be adjusted to the hood of the Alpine Sun Lamp.

This use of the rays is of great and growing importance, and all users of Ultraviolet Rays therapeutically should give this phase of the subject a thorough consideration.

Home Model Alpine Sun Lamp



HOME MODEL ALPINE SUN LAMP
Alternating Current - - Model 302

As pioneers in the field, and makers of the standard Ultraviolet Apparatus for physicians' use—the ALPINE SUN, the LUXOR and the KROMAYER QUARTZ LAMPS, the HANOVIA COMPANY has a direct interest in safeguarding the beneficent Ultraviolet Rays from incorrect usage and from abuse through self-diagnosis.

At the same time, the use of Ultraviolet Light is of great and growing importance as a prophylactic agent as well as in specific diseases. Its use at home is certain to become more and more widespread.

It is the duty of all who have the public interest at heart to make every attempt, not timorously to deprive the public of the benefits of Ultraviolet Rays, but to see that it is used with understanding.

In bringing out the HOME MODEL specially for the home, the HANOVIA COMPANY does not intend, nor wish to stimulate the indiscriminate, unin-

formed use of Ultraviolet Rays. It wishes merely to introduce a modality safe for home treatment, and one with which the physician can combat the use, not only of cheap, fraudulent devices, but also the inferior Ultraviolet Lamps, which, by their ineffectiveness, may injure public confidence in the entire science of light therapy, and in the physician or surgeon who prescribes it.

Physicians throughout the country for years have been urging us to design a smaller quartz lamp which they can recommend for tonic use in the home. Here is presented the Lamp—**THE HOME MODEL ALPINE SUN LAMP.**

Where serious illness requires treatment in the patient's home, as in the case of a bedridden patient, for example, the physician will naturally wish to prescribe the larger Alpine Sun Lamp, and will wish to personally supervise treatments.

Home Model Alpine Sun Lamp



HOME MODEL ALPINE SUN LAMP

Direct Current - - - - Model 300

This new HOME MODEL ALPINE SUN LAMP has all the high mechanical excellence, all the precise controllability and simplicity of design, characteristic of HANOVIA Equipment. Exactly the same scientific care is exercised in its

manufacture, and it is subjected to the same rigid tests. It is of lower intensity than that of the professional models—it is smaller in size, and may be set up on a table or desk. It is very light in weight, and is truly portable.

Sollux Lamp



SOLLUX LAMP—PHYSICIANS' TYPE

*With 1500 Watt Element and Screen . . . Model S100
With 1000 Watt Tungsten Filament Bulb . . . Model S101*

A precision lamp combining economy with therapeutic efficiency. It is attractive and dignified—a scientifically designed radiant heat generator consisting of four special resistance rods, consuming 1500 watts, and giving ample intensity for all dosages.

For the first time in the construction of any radiant heat lamp, HANOVIA engineers, by the application of correct scientific design, have developed a unique combination of heating element and reflector, resulting in an almost flat field in regard to heat distribution at any distance from the lamp.

Sollux Lamp



SOLLUX LAMP SPECIALISTS' TYPE

Model S110

The specialists' model SOLLUX RADIANT HEAT LAMP is a compact, small, easily handled lamp—for the specialist—particularly for ear and throat work. The lamp produces radiant heat, confining the heat rays so they may be focused to a local area. This type of radiant heat lamp has been used with a great degree of success on the continent, and has only of late been accessible in this country. Its outstanding success has been in treating small local areas where radiant heat is indicated and known to be of value.

SOLLUX LAMP—HOME MODEL TYPE

<i>Stand Type Complete</i>	<i>Model S102</i>
<i>Hand Lamp</i>	<i>Model S103</i>
<i>Hand Lamp with Extension and Clamp Device</i>	<i>Model S104</i>

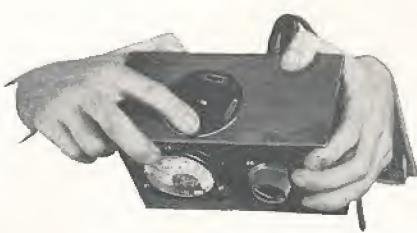
Modern therapeutic lamp designing has achieved a striking triumph in the originality of this double purpose lamp. No radiant heat lamp could provide more freedom of usage both for the prescriber and user.

The cost is so small that many physicians prefer to purchase several of these lamps and furnish them to those patients for whom it is desirable to

have a radiant heat lamp available in the home.

Furnished in three types—hand lamp, the same with extension and clamp device, and the floor stand model. The latter is beautifully finished in white enamel, the other parts in nickel, adding a decided tone to the surroundings. It possesses sufficient therapeutic intensity to have a definite clinical value.

Gordon Meter



—Front view, with right index finger on the rotating disc in which there are different size openings for admitting limited quantities of light.



—The top view shows the radio frequency milliammeter. The fingers are turning the knurled knob of the variable resistance rheostat. The eye-piece is pointing downward.

GORDON ULTRAVIOLET METER

Model 2063

The GORDON Ultraviolet Meter is an accurate and convenient instrument for the quantitative measurement of ultraviolet intensity. Essential for the control of dosage and assurance of more consistent results.

The continued broadening of the field for the application of ultraviolet therapy has increased the need of an accurate means for measuring Ultraviolet intensity. The newly perfected GORDON Ultraviolet Meter provides a dependable and convenient instrument for use in the hospital, clinic or physician's office . . . at once replacing crude chemical methods and the more involved procedure of the physical laboratory.

To make a quantitative determination of ultraviolet light, the Meter is attached to the electrical supply and aimed at the light source at the required distance. The rheostat knob is turned until a comparison lamp is operating at its maximum. The slotted disc is turned until the opening causes the fluorescent light to be less intense than the comparison. The rheostat

knob is then turned until the two lights are of equal intensity, and millimeter read.

Reference to a calibration table immediately gives the intensity of ultraviolet in ergs per second. The entire operation of measuring intensity and checking can be completed in one minute . . . enabling the user to measure the intensity of his light source every time treatment is given.

No such practicable means of accurately measuring dosage, and thus assuring more consistent results, has even before been available to the physician.

The GORDON Ultraviolet Meter is constructed to block out visible light, but measures the ultraviolet only quantitatively. It can be previously calibrated against any determined light source to measure the intensity of sunlight, the long ultraviolet waves which pass through window glass, the light of the carbon arc lamp or the shorter waves of the quartz mercury arc lamp.

Accessories



PORABLE WATER CIRCULATING UNIT

*Direct Current - - - Model 2061
Alternating Current - Model 2062*

The HANOVIA PORTABLE WATER CIRCULATING UNIT consists of a pump, motor and cooling device, encased in an attractive metal container.

To operate, the unit is connected with an electric outlet and the tank filled. This requires about five pints of water—preferably, but not necessarily, distilled. The equipment requires no constant attention, but once a month the motor should be oiled and the tank flushed out and refilled. Conveniently placed cups are provided on the motor for oiling, and the plug at the bottom of the radiator simplifies draining.

In line with the usual HANOVIA policy of making current improvement in its lamps available to users at the lowest possible cost, the PORTABLE WATER CIRCULATING UNIT has been developed for use with the Kromayer Lamp. This unit makes it possible for all Kromayer owners to make their equipment comparable with the latest models—without spending a cent for replacement.

The primary purpose of the Water Circulating Unit is to make the lamp independent of outside water supply—and therefore readily portable. Its advantages are apparent. The average doctor or dentist has a mass of equipment huddled in the vicinity of his water supply, which could be more conveniently and efficiently operated in another part of his office. With this unit the Kromayer can even be moved to an inner room, where it may be in operation while another patient is in the main office.

Another feature of the unit is that it permits the use of distilled water, thereby insuring more perfect operation.



HANOVIA TIME SWITCH
Model 2072

This is the most practical electric time switch unit obtainable. It embodies the finest workmanship, and is capable of efficiently performing the duties required of it. The definite time for the ultra violet exposure is set. At the end of the period, the current is automatically turned off by the timer. It is convenient and practical—usable with any device employing electric current of the ordinary household consumption.



HANOVIA INTERVAL TIMER
Model "A"-2074

Here is by far the most efficient type of hand wound automatic interval timer. It gives double service, that is, it keeps correct time and has an automatic time alarm device which can be set from one to ninety minutes. The Timer is attractively finished in nickel and buff lacquer.



HANOVIA INTERVAL TIMER
Model "B"-2073

Here is an efficient timer which can be set for any period of time from one to sixty minutes. At the end of the period set on the Timer a bell alarm is given, warning of the completion of the exposure time. It is inexpensive, well made and attractively finished in nickel.

